

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: ISLAND POND	Lake Area (ha):	63.94
Town: STODDARD	Maximum depth (m):	4.5
County: Cheshire	Mean depth (m):	2.4
River Basin: Merrimack	Volume (m ³):	1529500
Latitude: 43°04'00" N	Relative depth:	0.5
Longitude: 72°04'56" W	Shore configuration:	2.22
Elevation (ft): 1281	Areal water load (m/yr):	844.0
Shore length (m): 6300	Flushing rate (yr ⁻¹):	353.0
Watershed area (ha): 8852.1		
% watershed ponded: 4.3	Lake type:	natural w/dam

BIOLOGICAL:

10 February 1994

13 September 1993

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 35%	MICROCYSTIS 50%
	#2	ASTERIONELLA 30%	MERISMOPEDIA 10%
	#3	SYNURA 25%	
PHYTOPLANKTON ABUNDANCE (cells/mL)			405
CHLOROPHYLL-A (µg/L)			15.05
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 53%	NO ZOOPLANKTON
	#2		COUNTS
	#3		
ROTIFERS/LITER		44	
MICROCRUSTACEA/LITER		9	
ZOOPLANKTON ABUNDANCE (#/L)		53	
VASCULAR PLANT ABUNDANCE			Scat/Common
SECCHI DISK TRANSPARENCY (m)			3.8
BOTTOM DISSOLVED OXYGEN (mg/L)		10.0	8.5
BACTERIA (E. coli, #/100 ml)	#1		< 1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: ISLAND POND
Town: STODDARD

	10 February 1994		13 September 1993		
DEPTH (m)	1.0	3.0	1.0		3.0
pH (units)	5.7	5.7	6.6		6.2
A.N.C. (Alkalinity)	2.6	2.5	2.2		2.0
NITRATE NITROGEN	0.08	0.08	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.30	0.36	0.28		0.24
TOTAL PHOSPHORUS	0.007	0.008	0.010		0.009
CONDUCTIVITY (μ mhos/cm)	41.7	41.8	34.4		34.4
APPARENT COLOR (cpu)	44	44	26		27
MAGNESIUM			0.42		
CALCIUM			1.8		
SODIUM			3.5		
POTASSIUM			0.43		
CHLORIDE	5	5	5		5
SULFATE	6	6	4		4
TN : TP	54	55	28		27
CALCITE SATURATION INDEX			4.1		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

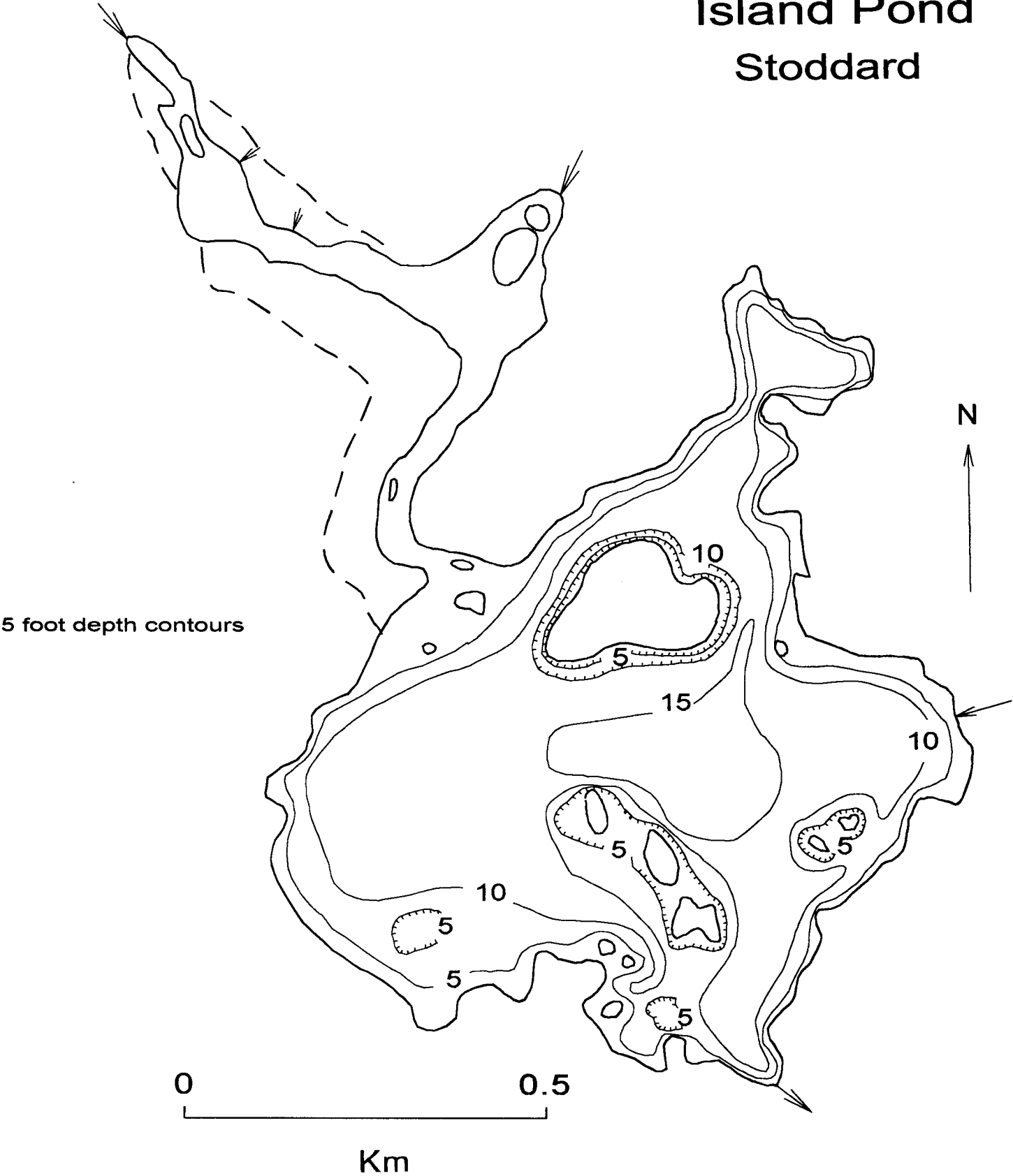
D.O. S.D. PLANT CHL TOTAL CLASS

**	2	2	3	7	Meso.
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COMMENTS:

1. This pond was previously surveyed and classified in 1979. There was no change in trophic classification but some water quality differences were noted. The algae (chlorophyll) level was three times higher in 1993. A temperature stratification and bottom dissolved oxygen deficit was noted in 1979, but conditions were isothermal and iso-oxic (same top to bottom) in 1993. Plants were rated very abundant in 1979, but that rating included the wetland areas in the northern end that were not included in the 1993 evaluation.
2. The wholewater phytoplankton was dominated by the blue-greens Merismopedia (40%) and Microcystis (20%), along with Cryptomonas (15%).

Island Pond Stoddard



FIELD DATA SHEET

TOWN: STODDARD

WEATHER: BREEZY, SUNNY & MILD

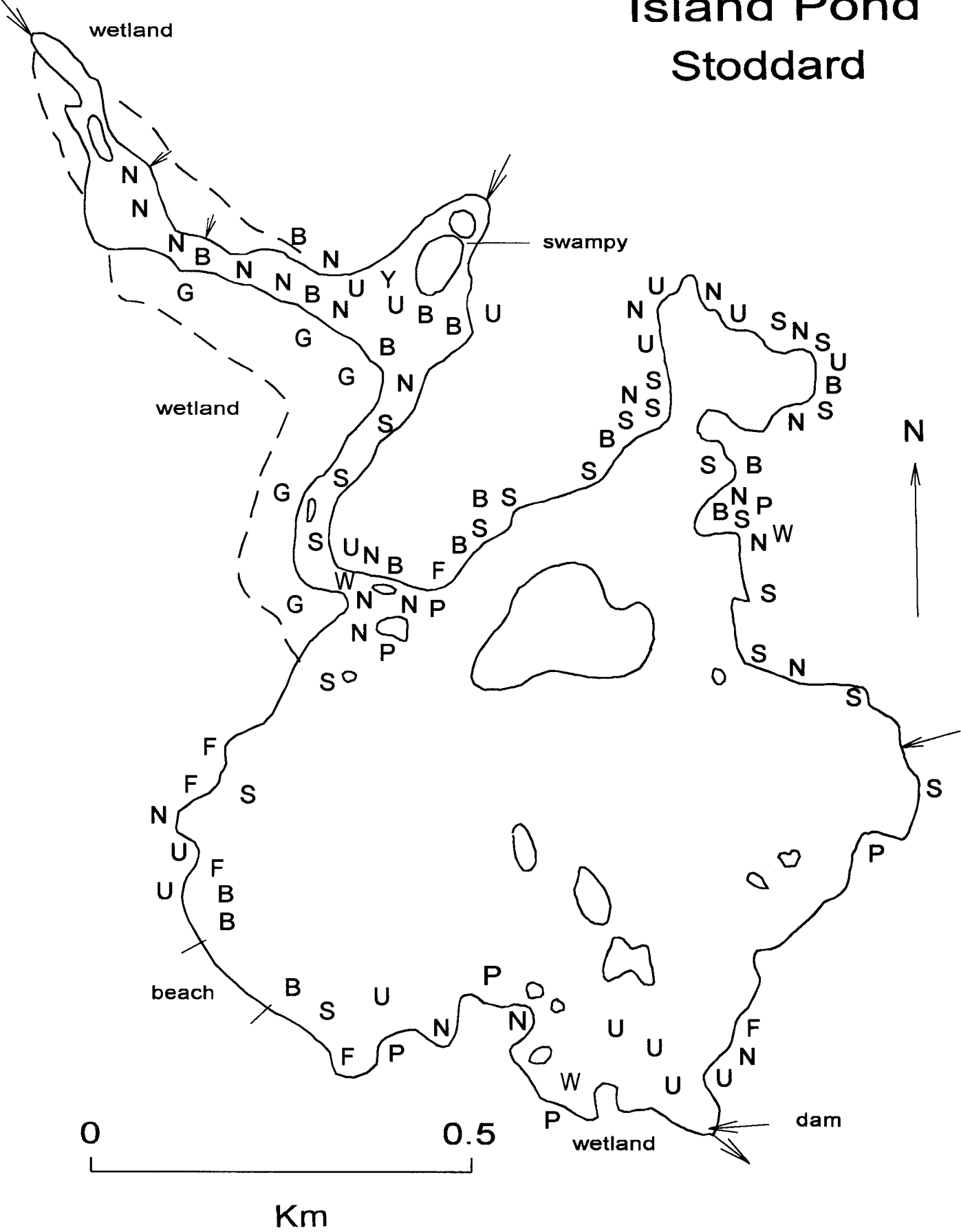
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COMMENTS :

TIME: 1400

***Dissolved oxygen values are in mg/L**

Island Pond Stoddard



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